



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/785,619 | 02/23/2004 | Christopher M. Look | 6518P010 | 2969 |
| 8791 | 7590 | 02/23/2006 | EXAMINER | |
| BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030 | | | STAHL, MICHAEL J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2874 | |

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

11/11

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/785,619 | Applicant(s) LOOK, CHRISTOPHER M. | |
| | Examiner Mike Stahl | Art Unit 2874 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-13,15,16,18 and 19 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8 and 11 is/are rejected.
- 7) ☒ Claim(s) 10,12,13,15,16,18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Drawings

The replacement sheet for Figure 3C is accepted.

Claim Objections

Claim 13 is objected to because in line 5, "plurliaty" should be changed to "plurality".

Claim 16 is objected to because in line 8, "plurliaty" should be changed to "plurality".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-6, 8, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Koh et al. (US 6801679).

Claim 1: Koh discloses a method including: diverting a predetermined portion (via taps 34) of each of a plurality of optical signals to a plurality of detectors 62 (via couplers 48) within a first optical network node; and detecting the predetermined portion of the plurality of signals using the plurality of detectors such that each detector detects one of the optical signals (figs. 1A-2B), and using a variable attenuator 210 to adjust a power level of a remaining portion of each of the plurality of optical signals (fig. 7; col. 12 lns. 25-33). It is noted that the variable

attenuators alternatively may be placed after the taps in the fig. 7 arrangement (col. 12 lns. 36-39). The same is true for the fig. 12 arrangements (col. 19 lns. 52-55).

Claim 3: The method further includes: demultiplexing by wavelength a plurality of incoming optical signals to the first optical network node from a second optical network node to generate one of the plurality of optical signals from each of the plurality of incoming optical signals. Note Demux **236** in figs. 12A and 12C. The VOA **210** and VOS **220** correspond to those of fig. 7. Use of the invention for communication between network nodes is mentioned e.g. at col. 4 ln. 3 – col. 6 ln. 36).

Claim 4: The method further includes multiplexing the plurality of optical signals to generate a plurality of outgoing optical signals after adjusting the power level of each of the plurality of optical signals. Note the multiplexer **230** of fig. 8 or **238** of fig. 12C.

Claim 5: The plurality of signals includes a plurality of optical signals generated by a plurality of light sources in a plurality of optical transceivers of the first optical network node in response to a plurality of electrical signals. Note the Add channels in fig. 12C or fig. 9.

Claim 6: The method further includes issuing an alarm if one of the plurality of photonic detectors detects a failure of one of the plurality of optical signals (col. 4 lns. 56-61).

Claim 8: Koh discloses an apparatus including: a switch fabric **250** to connect different ones of a first plurality of ports of the fabric with different ones of a second plurality of ports of the fabric; a plurality of photonic detectors (located in **220**, see fig. 7) to detect the presence or absence of an optical signal, the plurality of photonic detectors having a plurality of input ports; a variable optical attenuator **210** having a plurality of input ports and a plurality of output ports; and a tap (part of OCM **220**) including a plurality of input ports coupled to the second plurality

Art Unit: 2874

of ports of the switch fabric, a first plurality of output ports coupled to the plurality of input ports of the variable optical attenuator, and a second plurality of output ports coupled to the plurality of input ports of the plurality of photonic detectors such that each of the photonic detectors is optically coupled to a different one of the second plurality of ports. See fig. 12C and note again col. 19 lns. 52-55.

Claim 11: The apparatus components including the switch fabric, photonic detectors, tap, and variable optical attenuator are all on the same die (col. 19 lns. 15-17 and 47-59).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koh (cited above).

Claim 7: Koh does not specifically state that the predetermined tapped portion is approximately 5 %. A person skilled in the art would have known how to select an appropriate fraction for the tap; for example, the fraction should be high enough to provide a valid signal to the photodetectors but not so high as to render the remaining (untapped) signal too weak for downstream use. Thus it would have been obvious to a skilled person to use a tapped portion of approximately 5 % in a given implementation of the Koh method.

Response to Arguments

The 102 rejections based on Anthony et al. (US 5970201) and Kinoshita et al. (US 2004/0208574), and the 103 rejection based on Alferness et al. (US 5627925) in view of Anthony et al. in the previous Office action have been withdrawn in view of the changes to claims 1, 8, 13, and 16. It is noted that both Anthony and Kinoshita refer to feedback loops, in which the signal is tapped after it passes the variable attenuator. Putting the variable attenuators after the taps (as claimed) in these references would be contrary to their use of feedback loops. Although Anthony teaches that the attenuators could be placed on the output side of the switch fabric (col. 5 lns. 27-30), they would still be upstream of the taps as disclosed.

The remarks regarding the Koh reference are acknowledged, but are considered moot because of its disclosed alternate embodiments which were indicated above.

Allowable Subject Matter

Claims 10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 13, 15-16, and 18-19 will be allowable if the above informality objection to claims 13 and 16 is overcome (claims 15 and 18-19 stand objected to because of their dependence from claims 13 and 16).

Claims 10 and 12 depend from claim 8, which is herein rejected under only the Koh reference. Koh fails to teach or suggest including additional demultiplexers or multiplexers arranged in the particular manner set forth by claims 10 and 12 respectively.

Independent claims 13 and 16 each require a plurality of wavelength switch modules each for a different one of a plurality of wavelengths, and wherein each wavelength switch module has essentially the components set forth in claim 8. Koh does not teach or suggest providing a different module for each wavelength, but rather handles multiple wavelengths within the same module as shown for example in figs. 12A-12C. Thus claims 13 and 16 and their respective dependent claims are deemed to be novel and unobvious relative to the prior art of record.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Inquiries about this letter should be directed to Mike Stahl at 571-272-2360. Inquiries of a general or clerical nature (e.g., a request for a missing form or paper, etc.) should be directed to

Art Unit: 2874

the technical support staff supervisor at 571-272-1626. Official correspondence which is eligible for submission by facsimile and which pertains to this application may be faxed to 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions about the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Stahl MSS
Patent Examiner
Art Unit 2874

February 20, 2006



SUNG PAK
PRIMARY EXAMINER